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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,934

08/28/2006

Tadashi Katafuchi

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

GOLOBOY, JAMES C

ART UNIT

PAPER NUMBER

1771

NOTIFICATION DATE

DELIVERY MODE

08/24/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/590,934	<b>Applicant(s)</b> KATAFUCHI, TADASHI	
	<b>Examiner</b> JAMES GOLOBOY	<b>Art Unit</b> 1771	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/17/10.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 1,3-6,8 and 10-20 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1,3-6,8 and 10-20 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

1. Applicant's amendments filed 8/17/10 overcome the rejections set forth in the office action mailed 12/22/09. New grounds of rejection, necessitated by the amendments, are set forth below.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/17/10 has been entered.

#### ***Claim Rejections - 35 USC § 103***

3. Claims 1, 3-5, 10-11, 13-17, and 19-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Kadkhodayan (U.S. Pat. No. 2006/0111257).

An English machine translation of Morita, which is attached, has been used in setting forth this rejection. The equivalent U.S. publication, US 2004/0192562, is relied upon for interpreting the tables. In paragraph 8, Morita discloses a lubricating composition comprising a succinimide compound (component D of Morita) and an ashless dispersant (component E of Morita). The succinimide compound can be a monosuccinimides where hydrocarbon substituent has 8 to 30 carbon atoms, leading to

a molecular weight overlapping the range recited in amended claims 1 and 11-12. In paragraph 43 Morita teaches that the hydrocarbon substituent can be an alkyl or alkenyl group as recited in claims 1 and 11. in paragraphs 58-61 that the high molecular weight, borated succinimides can be mono- or bissuccinimides having an alkyl or alkenyl substituent with 60 to 350 carbon atoms, meeting the limitations of component (B) of claims 1 and 13-17. In paragraph 49 Morita discloses that the succinimide is preferably present in concentrations of 0.2 to 4 percent by weight, overlapping the ranges recited in claim 1. The sample compositions of Morita (Tables 1-1 and 1-2) comprise 1% by weight of borated dispersant, within the range recited for component (B) of claim 1 and leading to a blending ratio of 0.2 to 4, overlapping the range recited in claim 3. In paragraph 74 Morita discloses that the borated dispersant preferably provides 0.002 to 0.03% by weight (20 to 300 ppm) of boron, overlapping the ranges recited in claims 1 and 4. The sample compositions of Morita further contain ashless antiwear agents (trilauryltrithiophosphate), as recited in claim 5.

In paragraph 15 Morita discloses that the base oil preferably has a viscosity of 2 to 8 cSt at 100° C, within the range recited in claim 10. In paragraph 70 Morita teaches that the borated dispersant can be prepared using a boric acid or a boric acid ester, as recited in claims 19-20. The differences between Morita and the currently presented claims are:

- i) Some of the ranges of Morita overlap the claimed ranges instead of falling within them.
- ii) Morita does not disclose the sulfated ash content of the composition.

With respect to i), see MPEP 2144.05(I): "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976);"

With respect to ii), Kadkhodayan discloses in paragraph 102 and the reference's claim 47 compositions for automatic and continuously variable transmissions. In paragraph 101 Kadkhodayan teaches that these compositions have a sulfated ash content of 0.2 to 1.8% by weight, overlapping the ranges recited in claim 1. It would have been obvious to one of ordinary skill in the art to formulate the composition of Morita to have the sulfated ash content of Kadkhodayan, as Kadkhodayan teaches that it is a suitable sulfated ash content for automatic and continuously variable transmission lubricants.

4. Claims 6, 8, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita in view of Kadkhodayan as applied to claims 1, 3-5, 10-11, 13-17, and 19-20 above, and further in view of Koshima (WO 2004/113477).

The discussion of Morita in view of Kadkhodayan is paragraph 3 above is incorporated here by reference. Morita and Kadkhodayan disclose a transmission lubricants having excellent anti-shudder properties. The differences between Morita in view of Kadkhodayan and the currently presented claims are:

i) Morita and Kadkhodayan and including a succinimide meeting the limitations of component (A) of claim 1, but does not disclose borated succinimides of formula [1] as recited in claims 12 and 18.

ii) Morita and Kadkhodayan do not disclose a the inclusion of a non-phosphoric antiwear agent or a composition comprising no metals.

Koshima qualifies as prior art under 35 USC 102(a) and therefore cannot be disqualified by a statement of common ownership. Applicant could disqualify Koshima as prior art by perfecting the foreign priority claim of the current application. An English-language equivalent of Koshima, US 2006/0160709, is used in setting forth this rejection, and the column and line numbers referred to herein are those of the English-language reference.

With respect to i), in paragraph 1 Koshima discloses a transmission lubricant composition having anti-shudder properties. In paragraph 11 Koshima discloses that the composition comprises a low molecular weight succinimide similar to that of Morita, and teaches that it can be boronated as recited in claim 12. In paragraph 20 Koshima teaches that the boronization can be carried out by reacting with the boron compounds recited in claim 18. The use of the boronated low molecular weight succinimide of Koshima as the low molecular weight succinimide in the composition of Morita and Kadkhodayan meets the limitations of claims 12 and 18.

With respect to ii), Koshima discloses suitable antiwear agents for the anti-shudder transmission lubricants, including numerous non-phosphorus antiwear agents. The inclusion of one of the non-phosphorus antiwear agents of Koshima in the composition of Morita and Kadkhodayan meets the limitations of claim 6. In paragraph 30 Koshima discloses that the composition can include a detergent-dispersant, which can be a metal detergent, such as the calcium detergent of Morita, or an ashless dispersant-

detergent. The replacement of the calcium detergent of Morita with the ashless dispersant-detergent of Koshima meets the limitations of claim 8, as Morita does not require any metal components other than the calcium detergent.

It would have been obvious to one of ordinary skill in the art to use the boronated low molecular weight succinimide of Koshima as the low molecular weight succinimide in the composition of Morita and Kadkhodayan, as Koshima teaches that it imparts anti-shudder properties to transmission lubricants. It would have been obvious to one of ordinary skill in the art to include the non-phosphoric antiwear agent of Koshima in order to impart antiwear properties to the composition, and it would have been obvious to one of ordinary skill in the art to replace the calcium detergent of Morita with the ashless detergent-dispersant of Koshima, as Koshima teaches that they have equivalent use in anti-shudder-transmission lubricants.

### ***Response to Arguments***

5. Applicant's arguments filed 8/27/10 have been fully considered but they are not persuasive. The new combinations of references discussed above address the new limitations introduced by the amendments. Applicant has also filed a declaration signed by Shimizu and dated 8/16/10, purporting to show that the use of the claimed monosuccinimides provides unexpectedly superior results in relation to compositions comprising bisuccinimides. However, applicant has not demonstrated unexpectedly superior results commensurate in scope with the claims. The inventive examples supplied in the declaration and the specification comprise specific amounts of base oil

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and low and high molecular weight succinimides, while the claims allow for broad concentration ranges. The comparative examples do not comprise any antiwear agent, while Morita teaches the inclusion of extreme pressure/antiwear agents. The inventive examples have boron contents significantly higher than the low end of the claimed range and sulfated ash contents lower than those allowed by the claims. Applicant has not demonstrated or explained why one of ordinary skill in the art would expect the superior results to be maintained across the full scope of the claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES GOLOBOY whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James Goloboy/  
Examiner, Art Unit 1771